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EXAMINER

LYNCH, ROBERT A

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte JAMES ANDERSON

Appeal 2015-007066
Application 14/082,122
Technology Center 3700

Before CHARLES N. GREENHUT, MICHAEL L. HOELTER, and
ANNETTE R. REIMERS, *Administrative Patent Judges*.

GREENHUT, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellant appeals under 35 U.S.C. § 134 from a rejection of claims 1–12. We have jurisdiction under 35 U.S.C. § 6(b).

We affirm.

THE CLAIMED SUBJECT MATTER

The claims are directed to a torque mechanism actuated bioabsorbable vascular closure device. Sole independent claim 1, reproduced below, is illustrative of the claimed subject matter:

1. A medical device comprising:

a handle;

an elongate core element;

a generally tubular torsion element surrounding the core element and capable of transmitting torque along its length, the generally tubular torsion element having a proximal end and a distal end, and includes a helically coiled strip having a proximal end and a distal end, the helically coiled strip varying in width from the proximal end to the distal end and having a narrowest portion;

the handle being connected to the generally tubular torsion element proximate the proximal end of the generally tubular torsion element and the elongate core element being connected to the generally tubular torsion element proximate the distal end of the generally tubular torsion element; and

wherein the helically coiled strip bows radially outward at the narrowest portion when the helically coiled strip in the torsion element is unwound by rotating the generally tubular torsion element relative to the elongate core element.

REFERENCES

Wang	US 5,441,516	Aug. 15, 1995
Rivelli	US 7,520,893 B2	Apr. 21, 2009

REJECTION

Claims 1–12 stand rejected under 35 U.S.C. § 103(a) as unpatentable over Wang and Rivelli. Final Act. 3.

ANALYSIS

Appellant argues claims 1–12 as a group. Br. 5–10. We select claim 1 as representative of the group and decide the appeal of this rejection on the basis of claim 1 alone. 37 C.F.R. § 41.37(c)(1)(vii). The Examiner finds that Wang teaches a medical device that comprises, e.g., an elongate core element and a generally tubular torsion element that includes a helically coiled strip. Final Act. 3–4 (citing Wang, Abstract, 1:49–60, 3:61–4:8, Figs. 1, 3). The Examiner acknowledges that Wang fails to teach that its helically coiled strip varies in width as claim 1 requires, and therefore relies on Rivelli for this teaching. *Id.* at 4–5. According to the Examiner, Rivelli teaches a medical device with a helically coiled strip that “decreas[es] in width from the proximal end (12) to the distal end (14).” *Id.* (citing Rivelli, Figs. 1, 12A–12D). The Examiner further finds that Rivelli teaches that its helically coiled strip “bows radially outward at the narrowest portion,” *id.* at 5 (citing Rivelli, 3:4–6, 4:47–5:2, 5:36–38, Figs. 12B, 12C), and that the variable width

beneficially affect[s] the stiffness, rate of expansion, and area of helical contact for desired device characteristics for its desired intended use wherein the wider width portions effectively reduce the rate of expansion which reduces the force, damage or trauma caused by the wider width portion and the narrowest portions

provides a decrease in stiffness and increases the angle of catheter bend through which the catheter can be tortuously advanced and further allows for increased conformation to a target site.

Id. (citing Rivelli, Abstract, 2:3–18, 2:64–3:6, 9:52–10:15). The Examiner contends that it would have been obvious to a person of ordinary skill in the art to modify Wang’s device to have Rivelli’s variable-width helically coiled strip to obtain these benefits. *Id.*

First, Appellant argues that the Examiner has “failed to indicate any portion of [Wang’s coil] which is identified by Wang to differ from any other portion of the coil with regard to width and has thus clearly failed to identify even a ‘narrower’ portion, must less a ‘narrowest’ portion.” Br. 8. The Examiner, however, does not rely on Wang to teach a coil having non-uniform portions. Instead, the Examiner relies on Rivelli for this teaching, as noted above. *See* Final Act. 4 (citing Rivelli, Figs. 1, 12A–12D).

Second, Appellant argues that while Wang’s uniform coil is “adequate” to serve Wang’s stated purpose (“temporarily supporting a body vessel internally”), Rivelli’s coil is “significantly more difficult to fabricate,” and “would incur additional expense for fabrication with no commensurate benefit for the purpose of Wang.” Br. 9. However, Appellant does not provide any evidence or reasoned argument supporting the contention that Rivelli’s coil would have been more difficult or costly to fabricate. Moreover, Appellant seems to be arguing that because Rivelli’s coil would have been unnecessary to achieve *Wang’s* stated purpose, a person of ordinary skill in the art would not have been motivated to use Rivelli’s coil. But, we agree with the Examiner that a person of ordinary skill would have been motivated to combine Wang and Rivelli to achieve benefits associated

with Rivelli's device that were not contemplated by Wang. As the Supreme Court has held, "any need or problem known in the field of endeavor at the time of invention and addressed by the patent can provide a reason for combining the elements in the manner claimed." *KSR Int'l Co. v. Teleflex, Inc.*, 550 U.S. 398, 420 (2007). The Examiner properly looked to the advantages stated in Rivelli in using the non-uniform helically coiled strip, and Appellant does not dispute that these advantages would have resulted if Rivelli's coiled strip is used in Wang's device. Our reviewing court has recognized that a given course of action often has simultaneous advantages and disadvantages, and this does not necessarily obviate any or all reasons to combine teachings. *See Winner Int'l Royalty Corp. v. Wang*, 202 F.3d 1340, 1349 n. 8 (Fed. Cir. 2000) ("The fact that the motivating benefit comes at the expense of another benefit, however, should not nullify its use as a basis to modify the disclosure of one reference with the teachings of another. Instead, the benefits, both lost and gained, should be weighed against one another.").

Third, Appellant argues that because Rivelli's coil "is depicted as providing a uniform diameter coil upon deployment," Rivelli fails to teach "a helically coiled strip which bows radially outward at the narrowest portion when the helically coiled strip in the torsion element is unwound by rotating the generally tubular torsion element relative to the elongate core element," as recited in claim 1. Br. 9.

As the claim does not recite any language requiring a "uniform diameter coil upon deployment," as best as we can understand it, this argument is apparently directed to the phrase "bows radially outward." Appellant's Specification describes a medical device that is inserted into the

vasculature of a patient and fed through the vasculature to reach a desired location. Spec. 3:21–23. The device expands radially to force a plug or stent outwardly onto the vessel wall. *Id.* at 3:23–24. The device then retracts radially, leaving the plug or stent in place, at which point the device is withdrawn. *Id.* at 3:24–29. The helically coiled strip performs this expansion. *Id.* at 3:30–4:1.

The Specification states: “In its radially expanded state, a portion of the helically coiled member is rotationally partially ‘unwound,’ which produces an outward bowing and, therefore, a radial expansion in the ‘unwound’ portion of the helically coiled strip.” *Id.* at 4:2–4. This sentence is not entirely clear, but suggests that the bowing is related to, but not the same as, the radial expansion. We understand the term “bows radially outward” to refer to the radially outward movement of portions of the strip itself caused by “unwinding” the coil. This causes “radial expansion” of the strip and coil, or a portion thereof. *See also, e.g., id.* at 5:13–19.

As the Examiner correctly points out, Wang teaches a coiled strip that bows radially outward when being wound or unwound. Final Act. 4 (citing Wang, Abstract; col. 1, ll. 49–60; col. 3, l. 61–col. 4, l. 8); *see also* Wang, col. 4, l. 62–col. 5, l. 26. The Examiner also correctly finds that Rivelli’s helically coiled strip exhibits similar radial expansion, and does so, more rapidly, at its “narrowest portion,” resulting from radially outward bowing due to its shape-memory characteristics. Final Act. 4–5 (citing Rivelli, Figs. 12B–C). That the coiled strips of both Wang and Rivelli are also “depicted as providing a uniform diameter coil upon deployment,” as Appellant contends, does not inform us of Examiner error, because the claim, which merely requires that the coiled strip bow radially outward “at the narrowest

portion,” does not exclude devices in which the wider portions also bow radially outward. Thus, we are not apprised of any aspect of the claimed subject matter that would not result from the Examiner’s proposed *combination* of the references. *See* Br. 9–10.

For the foregoing reasons, we sustain the rejection of claims 1–12 as unpatentable over Wang and Rivelli.

DECISION

The Examiner’s rejection of claims 1–12 is affirmed.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

AFFIRMED